

FRENKEL', I.B.

Effect of the composition of raw material blends on the speed of the
workers on carding machines. Tekst.prom 22 no.3:53-55 Mr '62.
(MIRA 15:3)

1. Glavnnyy inzh. Dunayevetskoy sukonnoy fabriki imeni Lenina.
(Carding machines)

FRENKEL', I.B.

Experiment in the manufacture of lavsan and blended lavsan-wool
fabrics. Tekst.prom. 22 no.6:19-24 Je '62. (MIRA 16:5)

1. Glavnnyy inzh. Dunayevetskoy sukonnoy fabriki.
(Textile fabrics)

EKHISKELEASHVILI, G.I., mladshiy nauchnyy sotrudnik; DANILINA, A.I.,
mladshiy nauchnyy sotrudnik; FRENKEL', I.B.

Manufacture of woolen scarves with the admixture of rabbit
hair. Tekst. prom. 22 no.7:17-19 Jl '62. (MIRA 17:1)

1. TSentral'nyy nauchno-issledovatel'skiy institut shershtyanoy
promyshlennosti (for Ekhiskelashvili, Danilina). 2. Glavnnyy
inzh. Dunayevetskoy sukonnoy fabriki imeni V.I. Lenina (for
Frenkel').

L 55151-65 EMT(d)/EEC(k)-2/EEC-4/EWP(v)/EWP(k)/EWP(h)/EWP(1) Po-4/Pq-4/
FI-3/Pq-1/Pk-4/P1-4 BN
ACCESSION NR AM5005930 BOOK EXPLOITATION UR/ 681.2.002.56 M+1

Kostinetskiy, B. D.; Pak, V. A.; Fesnovskaya, T. Kh.; Gorokhova, N. S.; Krastoshovskiy
Z. M.; Rabinovich, G. A.; Il'jinburg, Yu. A.; Frankel', I. B.

Automatic devices and regulators, handbook material (Avtomaticheskiye pribory i
regulyatory; spravochnye materialy) Moscow, Izd-vo " Mashinostroyeniye", 64.
0704 p. illus., fold. diagrs. Errata slip inserted. 19,000 copies printed

TOPIC TAOS: automatic control, automatic temperature control, automatic pressure
control, automatic vacuum control, temperature instrument, pressure measuring
instrument, flow meter, liquid level instrument, pneumatic servomechanism

PURPOSE AND COVERAGE: The book describes the equipment used for automatic control,
signaling, and regulation of technological processes, and discusses temperature,
pressure, and level control devices, hydraulic, pneumatic, electric, and electronic
direct-acting regulators. The book is intended for engineering and technical
personnel engaged in the design, planning, and operation of automated industrial
enterprises, and may prove useful to students at higher and secondary specialised
schools.

Card 1/2

L 55151-65

ACCESSION NR AN5005930

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SUBMITTED: 18Jun64

SUB CODE: IE, EC

NO REF SOW: 000

OTHER: 000

Card 2/2

FRENKEL', I.D.

Conference at Caucasus Mineral Waters on problems of the physiology, clinical aspects, and treatment of diseases of the gall bladder and the biliary tract. Vop. kur., fizioter. i lech. fiz. kul't. 24 no. 4:377-379 Jl-Ag '59. (MIRA 13:8)
(GALL BLADDER--DISEASES) (BILIARY TRACT--DISEASES)

FRENKEL', I.D., aspirant

Change in the reactivity of diabetes mellitus patients to insulin
under the influence of health resort treatment in Yessentuki. Uch.
zap.Pyat.gos.nauch.-issl.bal'n.inst. 3:185-190 '60.

(MIRA 15:10)

(DIABETES)
(YESSENTUKI--HEALTH RESORTS, WATERING-PLACES, ETC.)
(INSULIN)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620007-8

FRENKEL', I.D., aspirant

Chemical factors of neural stimulation in diabetes mellitus and
their change under the influence of treatment; preliminary report.
Uch.zap.Pyat.gos.nauch.-issl.bal'n.inst. 3:191-200 '60.

(MIRA 15:10)

(DIABETES) (NEUROCHEMISTRY)
(HEALTH RESORTS, WATERING-PLACES, ETC.)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620007-8"

FRENKEL', I.D.

Effectiveness of health resort treatment for patients with diabetes mellitus in connection with a change in the functional state of the vegetative nervous system. Probl. endon. i gorm. 6 no.6:22-28 '60. (MIRA 14:2)

(DIABETES MELLITUS) (HEALTH RESORTS, WATERING PLACES, ETC.)
(NERVOUS SYSTEM, AUTONOMIC)

FRENKEL', I. D.

Cand Med Sci - (diss) "Effectiveness of health resort treatment of patient with sugar diabetes in the Yessentuki." Moscow, 1961. 15 pp; (Ministry of Public Health RSFSR, Scientific Research Inst of Health Resort Practice and Physiotherapy); 250 copies; price not given; (KL, 10-61 sup, 227)

"APPROVED FOR RELEASE: 06/13/2000

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APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620007-8"

PHASE I BOOK EXPLOITATION

685

Frenkel', I. L., Engineer

Puti povysheniya koefitsiyenta moshchnosti na promyshlennyykh predpriyatiyakh
(Ways of Increasing the Power Factor in Industrial Enterprises)
Minsk, 1957. 59 p. 2,000 copies printed.

Sponsoring Agency: Vsesoyuznoye nauchno-tehnicheskoye obshchestvo energeticheskoy
promyshlennosti. Belorusskoye respublikanskoye otdeleniye.

Ed.: Mekhedko, F. V., Candidate of Technical Sciences; Tech. Ed.: Bartman, B. I.

PURPOSE: This book is intended for electrical engineers responsible for industrial-
plant power distribution.

COVERAGE: The book briefly outlines ways and means for a more economical utilization
of electric power capacities in Belorussian industrial establishments. A list
of 30 plants with a relatively low power factor of load ($\cos\varphi$) is included.
There are 13 Soviet references. There are no personalities mentioned.

Card 1/4

Ways of Increasing (Cont.)

685

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Ways of Increasing (Cont.)

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AVAILABLE: Library of Congress (TK 4015.P7)

JG/bmd
9-26-58

Card 4/4

8(0)

SOV/112-59-3-4856

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 3, p 78 (USSR)
AUTHOR: Frenkel', I. L.

TITLE: New Types of Equipment Should be Adopted for Electrical Installations in
Residential and in Administrative Buildings (Vnedryat' novyyu tekhniku v
elektrooborudovaniye zhilykh i administrativnykh zdaniy)

PERIODICAL: Energ. sb. Nr 5, Minsk, 1957, pp 162-165

ABSTRACT: A summary of reports delivered in April, 1957, in Minsk, at a
conference on design, installation, and operation of electrical equipment in
buildings.

Card 1/1

FRENKEL, I. L.

Ca

PROCESSING AND PREPARATION

HF

External pancreatic secretion in underfed children. I.
I. Frenkel. *Pediatrics* 1946, No. 2-3, 23-6.—Conclusions based on data, on 23 hypotrophic and 13 well-fed infants, 10 weeks to 18 months old, indicate that the functional capacity of the pancreas is generally disturbed increasingly so with advancing hypotrophy. The lipolytic capacity of duodenal juice is always diminished, lowering the absorption of fats, with a high percentage of fat being eliminated in feces, and directly proportional to the degree of hypotrophy. The amylase activity fluctuates in healthy as well as underfed infants, and depends on the quantity of carbohydrates ingested. In advanced hypotrophy, however, the amylolytic function of the duodenal juice is constantly low, regardless of the quantity of carbohydrates given. The amylase content of the blood is in most cases high; up to 800 units. Trypsin activity is also lowered. The pH of the juice is const. (6.8-7).
T. Lassae

ASH-SLM METALLURGICAL LITERATURE CLASSIFICATION

FRENKEL', I. L.

PA 61/49162

USSR/Medicine - Literature

Nov/Dec 48

"Annotated List of Articles Received by the Editor" 4 3/4 pp

"Pediatriya" No 6

Reviews 12 articles, among them "Penicillin Treatment of Pneumonia According to the Data of Poly-clinics and Consultation Groups," by I. L. Frenkel', and "Cases of Tickborne Encephalitis With a Cyclical Course," by A. M. Sumakaya.

61/49162

FRENKEL', I. L.

USSR/Medicine - Streptomycin

Aug 51

"Streptomycin Treatment of Children With Tuberculous Meningitis," I. L. Frenkel', Cand Med Sci, Kaluga Children's Hosp

"Sov Med" No 8, pp 26-28

Treatment with streptomycin for tuberculous meningitis in children between 7 mos and 15 yrs is often successful. Results depend on age, time when treatment is started, presence or absence of tuberculous disease in other organs, the advance of the disease has made in the brain tissue. Diagnosis within 1st 10 days is important. Since the disease is secondary and not primary infection,

204T46

USSR/Medicine - Streptomycin (Contd)

Aug 51

treatment must combine intramuscular and endolumbar administration, the latter by introducing streptomycin into the subarachnoid space unless a block has developed or the spine is affected. The treatment is to be used in conjunction with other treatments which mobilize the protective powers of the organism. Two courses of treatment must follow each other with a 5-6 day interval if the clinical picture warrants, otherwise there should be no interruption. If paresis or paralysis develop during treatment the latter should not be discontinued, but carried out within a shorter time.

204T46

FRENKEL', I.L., kand.med.nauk, zasluzhenny vach RSFSR; GOTLIB, V.O.

Additional training of pediatricians is a vital factor in reducing morbidity and mortality among children. Zdrav. Ros. Feder. 6 no.3: 21-23 Mr '62. (MIRA 15:4)

1. Glavnny pediatr Kaluzhskogo oblastnogo otdela zdravookhraneniya (for Frenkel'). 2. Glavnny vach Kaluzhskoy detskoy bol'nitsy (for Gotlib).

(CHILDREN--DISEASES)

(CHILDREN--MORTALITY)

FRENKEL', I. L., kand. med. nauk; GOTLIB, V. O.; KUZOVKOVA, Ye. S.

Mass prevention and treatment of rickets with maximum doses of
vitamin D in Kaluga Province. Pediatriia no.4:52-54 '62.
(MIRA 15:4)

1. Iz Kaluzhskogo oblastdravotdela (zav. N. G. Afanas'yeva) i
Kaluzhskoy detskoy bol'nitay (glavnnyy vrach V. O. Gotlib)

(KALUGA PROVINCE—RICKETS) (VITAMINS—D)

FRENKEL', I.M., kandidat tekhnicheskikh nauk.

[Tables for determining composition of concretes, selection of materials for it, and setting the time for unsheathing] Tablitsy dlia naznacheniia sostava betona, vybora materialov dlia nego i ustaniovleniya strokov raspalubki. Izd. 6., perer. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitektуре, 1952. 39 p.

(MLRA 6:10)

(Concrete--Tables, calculations, etc.)

FIXDEL', I.A., kandidat tekhnicheskikh nauk; FRENKEL', I.M., kandidat tekhnicheskikh nauk, Födakteř; POPOV, V.I., redakteř; DAKHNOV, V.S. tekhnicheskiy redakteř.

[Field method of testing strength of concrete] Polevai metod otseñki prechnesti betona. Moskva, Gos.izd-vo lit-ry po strelitel'stvu i arkhitektury, 1955.23 p.
(MLRA 9:4)
(Concrete--Testing)

FRENKEL, I. M.

USSR.

Selecting composition of high-strength stiff concrete. I. M. Frenkel. *Straid. Prom.* 33, No. 4, 31-011554-8. High-strength concrete can be prepd. with low or normal proportions of cement when a min. water-cement ratio is employed and the stiff mix is well vibrated. Soils with not more than 3% clay and low-water-absorbing gravel are required here. Conditions to be observed in selecting suitable mixes and a set of empirical formulas for them given are given. Since the Vicat needle cannot be used with stiff concrete, an app. for testing concrete is proposed. A cubic mold 15-20 cm. on the side is filled with concrete and placed on a vibrator. A plate perforated with 3-mm. holes is placed on top of concrete and loaded by means of a lever and hanging wt. The vibrator is switched on, and the time between the start of vibration and the appearance of water in the holes of the plate, corresponding to the condensing of concrete, is measured with a stop watch. J. D. Gal.

FRENKEL', I.M., kand.tekhn.nauk.

Measuring the stiffness of concrete mixes with a viscosimeter.
Stroi.prom. 35 no.6:36-37 Je '57. (MIRA 10:10)
(Concrete--Testing)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620007-8

FRENKEL', I.M., kand.tekhn.nauk

Methods for curing concretes. Bet. i zhel.-bet. no.6:230-231 Je '58.
(MIRA 11:6)
(Concrete)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620007-8"

UTENKOV, Vladimir Fedorovich; VLASOVA, Mariya Andreyevna; FRENKEL', I.M.,
red.; ZERNOV, G.M., otv. za vypusk; SUKHAREVA, R.A., tekhn.red.

[Special problems in and methods for conducting building operations
under winter conditions] Osobennosti i metody proizvodstva stroi-
tel'nykh rabot v zimnee vremia. Moskva, Ob-vo po rasprostraneniuu
polit. i nauchn.znanii RSFSR, 1959. 34 p. (Moskovskii dom nauchno-
tekhnicheskoi propagandy. Peredovoi opyt proizvodstva. Seriia:
Stroitel'stvo, no.1).
(MIRA 13:6)

(Building--Cold weather conditions)

BERDICHESKII, G.I., kand.tekhn.nauk; DMITRIYEV, S.A., kand.tekhn.nauk;
MIKHAYLOV, K.V., kand.tekhn.nauk; GOZOZDEV, A.A., prof., doktor
tekhn.nauk; MIKHAYLOV, V.V., prof., doktor tekhn.nauk; BULGAKOV,
V.S., kand.tekhn.nauk; VASIL'YEV, A.P., kand.tekhn.nauk; YEVGEN'YEV,
I.Ye., kand.tekhn.nauk; MULIN, N.M., kand.tekhn.nauk; SVETOV, A.A.,
kand.tekhn.nauk; FRENKEL', I.M., kand.tekhn.nauk; BELOBROV, I.K.,
inzh.; MATKOV, N.G., inzh.; MITNIK, G.S., inzh.; SKLYAR, B.L., inzh.;
SHILOV, Ye.V., inzh.; MASENKO, I.D., inzh.; NIZHNICHENKO, I.P., inzh.;
FILIPPOVA, G.P., inzh.; MIZERNYUK, B.N., kand.tekhn.nauk; SHEYNFEL'D,
N.M., kand.tekhn.nauk; BALAT'YEV, P.K., kand.tekhn.nauk; BARBARASH,
I.P., kand.tekhn.nauk; MITGARTS, L.B., kand.tekhn.nauk; SHIFRIN, M.A.,
kand.tekhn.nauk; PETROVA, V.V., red.izd-va; TEMKINA, Ye.L., tekhn.red.

[Temporary instruction on the technology of making prestressed re-inforced concrete construction elements] Vremennaya instruktsiya po
tekhnologii izgotovleniya predvaritel'no napriazhennykh zhlezobetonnykh konstruktsii. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i
stroit.materialam, 1959. 255 p. (MIRA 12:12)

(Continued on next card)

BERDICHESKII, G.I.---(continued) Card 2.

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut betona i zhelezobetona, Perovo. 2. Nauchno-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR (for Gvozdev, V.V.Mikhaylov, Berdichevskiy, Bulgakov, Vasil'yev, Dmitriev, Yevgen'yev, K.V.Mikhaylov, Mulin, Svetov, Frankel', Belobrov, Matkov, Mitnik, Sklyar, Shilov). 3. Nauchno-issledovatel'skiy institut organizatsii, mekhanizatsii i tekhnicheskoi Akademii stroitel'stva i arkhitektury SSSR (for Masenko, Nizhnichenko, Filippova, Mizernyuk, Sheynfel'd). 4. Nauchno-issledovatel'skiy institut Glavmospromstroymaterialov (for Balat'yev, Barbarash). 5. Nauchno-issledovatel'skiy institut po stroitel'stvu Minstroya RSFSR (for Mitgarts, Shifrin). 6. Deystvitel'nyye chleny Akademii stroitel'stva i arkhitektury SSSR (for Gvozdev, V.V.Mikhaylov).

(Prestressed concrete)

FRENKEL', I.M., kand.tekhn.nauk; KUZNETSOVA, M.A., red.izd-va;
RUDAKOVA, N.I., tekhn.red.

[Utilizing the growth of the strength of concrete over a period
of time to save cement] Ispol'zovanie rosta prochnosti betona vo
vremeni dlia ekonomii tsementa. Moskva, Gos.izd-vo lit-ry stroit.,
arkhit.i stroit.materialam, 1961. 51 p. (Akademija stroitel'stva i
arkhitektury SSSR. Institut stroitel'nykh konstruktsii. Nauchnye
soobshcheniya, no.9). (MIRA 15:4)

(Concrete--Testing)

FRENKEL, I.M., kand. tekhn. nauk; TSEYLON, D.I., mladshiy nauchnyy sotr.;
STRASHNYKH, V.P., starshiy red.izd-va; BOROVNEV, N.K., tekhn.
red.

[Instructions for designing the computing and checking the strength
of the grades of concrete] Instruktsiia po raschetu sostava i kon-
troliu prochnosti vysokomarochnykh betonov. Moskva, Gos.izd-vo lit-
ry po stroit., arkhit. i stroit. materialam, 1962. 30 p.

(MIRA 15:6)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut betona i
zhelezobetona, Perovo.

(Concrete--Testing)

FRENKEL', I.M., kand. tekhn. nauk; MIRONOV, S.A., doktor tekhn. nauk, prof.; BARANOV, A.T., kand. tekhn. nauk; BUZHEVICH, G.A., kand. tekhn. nauk; MIKHAYLOV, K.V., kand. tekhn. nauk; MULIN, N.M., kand. tekhn. nauk; KHAYDUKOV, G.K., kand. tekhn. nauk; KORNEV, N.A., kand. tekhn. nauk; TESLER, P.A., kand. tekhn. nauk; BERDICHEVSKIY, G.I., kand. tekhn. nauk; VASIL'YEV, A.P., kand. tekhn. nauk; LYUDKOVSKIY, I.G., kand. tekhn. nauk; SVETOV, A.A., kand. tekhn. nauk; CHINENKOV, Yu.V., kand. tekhn. nauk; BELOBROVYY, .K., inzh.; KLEVTSOV, V.A., inzh.; DOBROMYSLOV, N.S., arkh.; DESOV, A.Ye., doktor tekhn. nauk, prof.; LITVER, S.L., kand. tekhn. nauk; FISHCHIK, M.A., inzh.; SKILYAR, B.L., inzh.; POPOV, A.P., kand. tekhn. nauk; NEKRASOV, K.D., doktor tekhn. nauk, prof.; MILOVANOV, A.F., kand. tekhn. nauk; TAL', K.E., kand. tekhn. nauk; KALATUROV, B.A., kand. tekhn. nauk; KARTASHOV, K.N., red.; MAKARICHEV, V.V., kand. tekhn. nauk, red.; YAKUSHEV, A.A., inzh., nauchnyy red.; BEGA, B.A., red. izd-va; NAUMOVA, G.D., tekhn. red.

[Reinforced concrete products; present state and prospects for development] Zhelezobetonnye konstruktsii; sostoianie i perspektivy razvitiia. Pod obshchei red. K.N.Kartashova i V.V.Makaricheva. Moskva, Gosstroizdat, 1962. 279 p.

(MIRA 15:8)

(Continued on next card)

FRENKEL', I.M.---(continued) Card 2.

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut betona i zhelezobetona, Perovo.
2. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Kartashov).
3. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Mironov).
4. Gosudarstvennyy institut tipovogo proyektirovaniya i tekhnicheskikh issledovaniy (for Bordichevskiy, Vasil'yev, Lyudkovskiy, Svetov, Chinikov, Belobrovyy, Klevtsov, Dobromyslov).
4. Vsesoyuznyy gosudarstvennyy proyektno-konstruktorskiy institut (for Desov, Litver, Pishchik).

(Precast concrete)

SKRAMTAYEV, B.G., prof., doktor tekhn.nauk; FRENKEL', I.M., kand.tekhn.nauk

"Concrete and concrete work" by N.A. Zhitkevich. Bet. i
zhel.-bet. 8 no.12:571-572 D '62. (MIRA 16:2)

1. Deystvitel'nyy chlen Akademii stroitel'stva i
arkhitektury SSSR (for Skramtayev).
(Concrete)
(Concrete construction)

TSEYLYON, D.I., inzh.; FRENKEL', I.M., kand. tekhn. nauk, red.; NIKOLAYEVA, N.M., red.; SHEVCHENKO, T.N., tekhn. red.

[High-strength concretes.] Vysokoprochnye betony. Moskva, Gosstroizdat, 1963. 66p. (Akademicheskaya stroitel'stva i arkhitektury SSSR. Institut betona i zhelezobetona, Perovo. Nauchnye soobshcheniya, no.15) (MIRA 16:11)

S/124/63/000/002/058/052
D234/D303

AUTHORS: Zablonskiy, K.I., Filipovich, S.I. and Frenkel', I.N.

TITLE: Methods of determining stresses and deformations in tooth models

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 2, 1963, 59,
abstract 2V473 (Nauchn. zap. Odessk. politekhn.
in-t, 1961, v. 39, 44-49)

TEXT: The authors describe methods of determining stresses in the tooth bases of gear wheels with M.L. Novikov's toothing, on models made of organic glass (modulus 30 mm, tooth inclination angle 90.5). The load was applied at different points of the tooth height and at three points along the length of the tooth (at the ends and in the middle). The displacement of contact towards the top of the tooth decreases the stresses on the side of extension and increases them on the side of compression. The friction forces appearing in the contact zone can lead to stresses amounting to 20% of the total stress. A decrease in the effect of the friction forces was achiev-

Card 1/2

Methods of determining ...

S/124/63/000/002/038/052
D254/D308

cd by vibrations of the installation and introduction of lubricants
into the contact zone of the teeth.

[Abstracter's note: Complete translation]

Card 2/2

FRENNKEL, J.N.

PHASE I BOOK EXPLOITATION

Sov/2931

25(1) Konferentsiya po oprosnoi rascheta. Konserviruvaniyu issledovaniy Zubchatykh peredach i peredach Evropy sverzhu. Odessa, 1937
 Razchet, konstruirorvaniye i issledovaniye peredach; trudy, Design, Construction, and Analysis of Gears and Gear Drives in Komponenti... vyp. 3 [Design, Construction, Problems in Transmissions, Components of Transmission] = Fizicheskaya i analiticheskaya issledovaniya na funktsiiyakh Gears and Gear Drives. Design, Construction, and Analysis of Gears and Gear Drives. Frankfurtsk, No. 3] /Odessa/. Izd. Odesskogo politekhnicheskogo universiteta. 1955. 126 p. 3,000 copies printed.

Sponsoring Agency: Odesskii politekhnicheskii institut, and Nauchno-tekhnicheskoye obshchestvo moshninostroitel'nyy promstremositi. Odesskaya oblastnoye pravlyeniye.

Ed.: I. P. Nitiforov, Soprimer; Editorial Board: L. S. Borovich, Candidate of Technical Sciences; M. S. Belyayev, Engineer; N. D. Genkin, Candidate of Technical Sciences; K. I. Zabloskiy, Candidate of Technical Sciences; P. S. Zak, Candidate of Technical Sciences; Ya. G. Kistyak, Candidate of Technical Sciences; N. N. Kudryavtsev, Doctor of Technical Sciences; V. P. Mat'nev, Candidate of Technical Sciences; N. S. Polotikov, Candidate of Technical Sciences; I. A. B. Brilikh, Candidate of Technical Sciences; Tech. Ed.: A. R. Komissarenko.

PURPOSE: This book is intended for design engineers in the machine-building and automotive industries, particularly gear designers.

COVERAGE: The technical papers contained in this book were originally presented at a conference on gear design held in Odessa in 1957. A number of papers deal with the causes of failure in modern gear drives under such severe service conditions as seizing and jamming. To determine these causes a study was made of the wear resistance of contact surfaces and the rigidity of gear teeth under load. Spur-gear drives and systems of enclosed gears, including the Vorokh-type gears, which are claimed to have many superior characteristics, and the double-helical type of worm gear drive are compared. A study is made of the rigidity of gear drives, particularly the rigidity of splined gear-to-shaft joints. A number of gear-testing methods and devices are also listed. No personalities Grishin, N. S. Load-bearing Capacity of a Gear System by N. D. Novikov.

Privalov, I. N. Experimental Determination of the Rigidity of 30-Degree Spur Gear Teeth 49

Gretsch, G. M. and V. M. Mal'zeva. Method of Gear Testing on a Holler Machine 57
 Kuznetsov, Yu. S. Study of Gear Wear of Reduction Mechanisms in Electric Book Drills 65
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 Selivachenko, V. G. Design of Teeth for the N. L. Mavlikov Gear Train and Some Special Features of Composite Gear Drives 91
 Sazan, B. S. Relationship Between Load Distribution in a Spined Joint of a Gear and Shaft and the Rigidity of Components in the Joint 97
 Ondrey, O. P. Maximum Value of the Coefficient of Overlap in Spur-Gear Trains With Sectoral Engagement With Straight Involute 103
 Zablotskiy, K. I. Gear-testing Installation 111

FRENNKEL', I.N.

25(1)

PHASE I BOOK EXPLOITATION

SOV/2928

Andozhskiy, Vsevolod Dmitrievich, Aleksandr Ivanovich Belyanin,
Vladimir Lvovich Veyta, Yevgeniy Grigor'yevich Ginzburg,
Aleksey Ilyarionovich Yefimovich, Igor' Samonovich Krivenko,
Vladimir Mikhaylovich Shmehikov, and Isra'il Nakhmenovich Frenkel'

Zubochatyye i chervyachnyye peredachi; nekotoryye voprosy teorii,
rascheta i proizvodstva (Spur Gear and Worm Gear Drives; Some
Problems in Theory, Design, and Manufacture) Moscow, Mashgiz,
1959. 219 p. Errata slip inserted. 9,000 copies printed.

Ed. (Title page): M. I. Kolchin, Doctor of Technical Sciences,
Professor; Reviewer: A. N. Grubin, Doctor of Technical Sciences,
Professor; Ed. (Inside book): N. P. Dolovanov, Candidate of
Technical Sciences; Ed. of Publishing House: N. Z. Simonovskiy;
Tech. Ed.: R. O. Pol'skaya; Managing Ed. for Literature on the
Design and Operation of Machinery (Leningrad Division, Mashgiz);
F. I. Fetisov, Engineer.

PURPOSE: This book is intended for technical personnel and
scientific workers interested in the theory of gears and
gear drives.

COVERAGE: This book deals with the calculation, design, and
practical application of gears and gear drives. The first
three chapters are devoted to new types of gears and gear
drives and to the manufacture of gears with advanced geometry
of engagement. The last four chapters describe theoretical
and practical methods of gear calculation. A description is
given of planetary gear drives with various types of engage-
ment, with emphasis on the design of planetary reducing gear
drives for use in electric motors. Recent achievements in the
Soviet gear-cutting industry and theoretical work on gear
design and calculations of stresses in gear trains are
discussed. No personalities are mentioned. There are 97
references: 82 Soviet, 10 German, 4 English, and 1 French.

Card 2/6

FRENKEL', I. N.

FRENKEL', I. N.: "Investigation of the strength of the straight teeth of cylindrical gear wheels." Min Higher Education Ukrainian SSR. Odessa Polytechnic Inst. Odessa, 1956.
(Dissertation for the degree of doctor in Technical Sciences)

SO: Knishnaya Letopis', No 36, 1956, Moscow.

KIST'YAN, Ya.G., kandidat tekhnicheskikh nauk; FRENKEL', I.N., inzhener.

Experimental determination of tooth rigidity of spur gear wheels
with external engagement. [Trudy] TSNIITMASH 81:172-182 '56.
(Gearing, Spur) (MLRA 9:12)

ANDOZHISKIY, Vsevolod Dmitriyevich, dotsent, kand.tekhn.nauk; BELYANIN,
Aleksandr Ivanovich, inzh.; VEITS, Vladimir L'vovich, inzh.;
GINZBURG, Yevgeniy Grigor'yevich, inzh.; YEFIMOVICH, Aleksey
Illarionovich, inzh.; KRIVENKO, Igor' Semenovich, inzh.; SHANNIKOV,
Vladimir Mikhaylovich, doktor tekhn.nauk; FRENKEL', Izrail' Nakh-
manovich, kand.tekhn.nauk; GRUBIN, A.N., prof., doktor tekhn.nauk,
retsenzent; KOLCHIN, N.I., prof., doktor tekhn.nauk, red.: GOLO-
VANOV, N.F., kand.tekhn.nauk, red.; SIMONOVSKIY, N.Z., red.izd-va;
POL'SKAYA, R.G., tekhn.red.

[Gear and worm drives; some problems in theory, design, and
manufacture] Zubchatye i cherviachnye peredachi; nekotorye voprosy
teorii, rascheta i proizvodstva. Pod red. N.I.Kolchina. Moskva,
Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 219 p.
(Gearing) (MIRA 12:6)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620007-8

ZABLONSKIY, K.I.; FILIPOVICH, S.I.; FRENKEL', I.N.

Methods for determining stresses and deformations in gear-teeth
models. Nauch. zap. Od. politekh. inst. 39:44-49 '61
(MIRA 17:3)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620007-8"

FRENNEL, IZRAIL'

DOBRYNIN, Il'ya Nikolayevich; FRENKEL' Izraill' Shmulevich; SHPITAL'SKIY,
N.I., redaktor; ROGACHEV, F.G., redaktor; OSTROV, M.S.,
tekhnicheskiy redaktor.

[Collection of geometry problems] Sbornik zadach po geometrii.
2-e izd.ispr. i dop. Moskva, Vses. uchebno-pedagog.izd-vo
Trudrezervizdat, 1955. 129 p. (MLRA 8:10)
(Geometry--Problems, exercises, etc)

SOV/29-59-4-16/26

22(1)
AUTHOR: Frenkel', K., Architect

TITLE: How Will the New School Be ? (Kakoy budet novaya shkola ?)

PERIODICAL: Tekhnika molodezhi, 1959, Nr 4, pp 20 - 23 (USSR)

ABSTRACT: In this article the author reports on the building of schools in the near future in the USSR. The December Session of the Supreme Soviet of the USSR passed the bill "On Tightening the Relationship Between School and Life and on the Further Development of Popular Education in the Country". On the basis of this bill the educational system will be re-organized. Compulsory education will be eight years. Afterwards, boys and girls wishing to have a complete secondary training may attend professional schools for 3 years. In each district of 5000 - 6000 inhabitants such a school will be established. On page 20 - 21 the plan of such a future school building elaborated by the Institute "Gipropros" of the Ministry of Popular Education of the RSFSR which has already been approved is shown. The new feature of this school is that it does not consist of one building but of a complex of buildings. All buildings of this complex are

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How Will the New School Be ?

connected by heatable corridors. The lower classes are separated from the upper ones. The 4 lower classes have 35 minute lessons the older pupils lessons of 45 minutes. This division was done in consideration of health and capacity of the various age groups. In the building for the upper levels there are also professional - technical workshops. The class rooms, cabinets, and laboratories are in the 2nd and 3rd floor. The gymnasium is bigger than usual, it has a length of 24 m and a width of 12 m. The aula is provided for 375 persons and has an own foyer and a room for motion picture apparatus. On Sunday pictures may be shown in the aula. All class windows are to the South. The windows are made of two types of glass for the protection against dazzling sunlight. A sound-absorbing plate is mounted to the ceiling of each class room. The floors are covered by special asbestos-resin plates which are decorative, durable, and sound absorbing. Every pupil will have a comfortable and hygienic desk of his own. The teacher's desk will be placed on a platform. Every class will have an own wash basin and glasscasing for educational appliances and

Card 2/3

How Will the New School Be ?

SOV/29-59-4-16/26

books. The school will be heated by air of 45°. Fountains with drink-water will be in the lounges. Rest rooms with beds and deck chairs will be at the disposal of children staying at the school all day long. There is also a dining room where lunch will be served. Workshops and teachers' rooms will be spacious and in sufficient number. Equipment and educational appliances will be according to the latest achievements of science and technics at home and abroad. Practical courses will be given in the workshops. In order to stimulate initiative and abilities exhibitions and competitions will be organized. On the roof an observatory will be established belonging to the school. On the terrain of 2 - 2.5 hectares belonging to the school sportsgrounds, playing grounds, fruit and vegetable gardens and parks will be laid out. After finishing the school the pupils receive a diploma and a professional qualification enabling them to enter university. There are 3 figures.

Card 3/3

FRENKEL', K.Sh.

Microvoltmeter for low-frequency inductive electric prospecting
techniques. Sbor.luch.rats.predl. pt. 2:13-17 '63. (MIRA 17:5)

1. Kabardino-Balkarskaya kompleksnaya geologicheskaya
ekspeditsiya.

FRENKEL', L. inzh.

"Atlas on the designs and networks of gas turbine systems" by
L.A. Shubenko-Shubina and others. Reviewed by L. Frenkel'.
Energomashinostroenie 7 no.7:45 Jl '61. (MIRA 14:8)
(Gas turbines)
(Shubenko-Shubina, L.A.)

L, *6/13/00*

Growth changes in the liponucleoprotein complexes in brain and in liver tissues. I. N. Bulankin, I. Yu. Lantoub, N. M. Novikova, T. K. Papakha, and L. A. Prekel. *Uchenye Zapiski Khar'kov. Univ. 53, Trudy Vses. Khim.-Fizichesk. Inst. Biol.* 21, 37-42 (1951). *Reprint. Zhur. Khim.-Biol. Khim.* 1955, No. 1423.—The structural proteins of the

brain and liver of rats 1-3, 30, 90, and 270-360 days old were exid. with 30% urea in Edsall sohn, and pptd. by the 5-fold addn. of H_2O . Detns. were made for total N, lipide, and nucleic acid P in the exid. material and in the intact tissue. In both instances the content of protein and of phospholipides increased with growth. The quantity of nucleic acid, especially deoxyribonucleic acid (DNA), was reduced. The ratio of ribonucleic acid/DNA increased. This was more evident in the structural proteins than in whole tissue. With the growth of the organism there may be a replacement of the nucleoprotein complex by lipides and by protein-lipide complex caused by the lowering in the protein-synthesizing processes of the organism. B. S. Levine

(A)

133-8-13/28

AUTHORS: Konstantinova, L.I., Lemlekh, Ya.M., and Frenkel', L.A.

TITLE: Gaseous preheating of rolls for rolling thin sheets.
(Gazovyy podogrev tonkolistovykh valkov pered ustanovkoj).

PERIODICAL: "Stal'" (Steel), No.8, 1957, pp.724-727 (USSR).

ABSTRACT: Preheating of rolls for rolling thin sheets before assembling in a rolling stand using a gas fired heating installation and the influence of such preheating on the durability of rolls and the output were investigated. The installation for preheating was described earlier (Ya. M. Lemlekh, "Sbornik Ratsionalizatorskikh Predlozheniy, Vnedrennykh v Proizvodstvo," Ts.IIN MChM, vyp.54, 1955). The distribution of thermocouples used for measuring roll temperatures is given in Fig.1. Heating of rotating (1 rpm) and stationary rolls was tested. Temperatures of experimental stationary and rotating rolls and the waste gas in various points of the heating chambers (A), pressure in the chamber and suction in flues (B), pressure of producer gas before the burner (V) are given in Figs.2 and 3 respectively. Changes in the distribution of temperatures across the roll from surface to centre at given time intervals are given in Fig.4. It was found that with preheating of rolls the output increases by 8-10% with simultaneous improvement

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133-8-13/28

Gaseous preheating of rolls for rolling thin sheets.
(Cont.)

of the surface quality of sheets. Mean service life between two subsequent regrindings increases from 63.5 hrs for cold rolls to 72 hrs for preheated rolls. The cost of induction heating of rolls is about 70% higher than that of gaseous preheating. The use of a gas fired preheating installation is recommended.

There are 4 figures and 4 references, all Slavic.

ASSOCIATION: Leningrad Branch of TsPKB of the "Energochermet" Trust, Odessa Steel Rolling Works. (Leningradskiy Filial TsPKB Tresta "Energochermet", Odesskiy Staleprokatnyy Zavod).

AVAILABLE: Library of Congress

Card 2/2

FRENKEL', L.A., inzh.

Operation of metallic recuperators. Trudy NTO chern. met. 20:431-
437 '60. (MIRA 13:10)

1. Staleprokatnyy zavod im. Dzerzhinskogo, g. Odessa.
(Heat regenerators)

ARNAUTOV, A. K.; BURSHTEYN, S. A.; GENES, V. S.; DZHAFAROV, G. K.;
KOGAN, I. A.; MAMOTYUK, Ye. M.; NIKOLAYEVA, M. G.; PISKAREVA,
Ye. V.; POPOVA, L. Y.; TKACH, V. K.; FASTYUCHENKO, O. V.;
FRENKEL', L. A.; TSYBENKO, P. A.

Characteristics of some early reactions of rats, irradiated
with various doses, to burning by flame. Radiobiologija 2 no.3:
406-413 '62. (MIRA 15:7)

1. Institut meditsinskoy radiologii, Khar'kov.

(X RAYS--PHYSIOLOGICAL EFFECT)
(BURNS AND SCALDS)

TKACH, V.K.; FRENKEL', L.A.

Studying the stability of protein structures by the method of non-stationary heat exchange of protein solutions in a high-frequency field. Biofizika 5 no.3:253-259 '60. (MIRA 13:7)

1. Khar'kovskiy gosudarstvennyy universitet, Institut meditsinskoy radiologii, Khar'kov.
(PROTEINS) (ELECTROCHEMISTRY)

27 1220

2209 1234 1275

32741
S/205/61/001/006/001/022
D268/D305

AUTHORS: Tkach, V.K., and Frenkel', L.A.

TITLE: The use of the high-frequency electric conductivity method for studying protein sorption characteristics under the action of ionizing radiation

PERIODICAL: Radiobiologiya, v. 1, no. 6, 1961, 824 - 829

TEXT: An original method for assessing protein sorption characteristics by determining the high-frequency electric conductivity temperature coefficients of their solutions is described. Sensitivity of the method enables concentrations of the order of 0.0005 N to be recorded; the reaction characteristic of proteins in very small concentrations of electrolytes can be studied, and, furthermore, the interaction of protein molecules with the electrodes is excluded. The method can be used both for studying the general problem of protein molecular structure and structural modifications as the result of ionizing radiations and has the following features: The sorption characteristics of protein molecules determine the ex-

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D268/D305

The use of the high-frequency ...

tent to which mineral, hydroxyl, hydrogen, and other small ions become bound to them. An electric field external to the protein solution orients the polar molecules and displaces the ions. Where ions move in a variable high-frequency field (7×10^6 c/s) protein macromolecules are unable to follow its variations because of their comparatively large mass and inertia. In this case the amount of electric conductivity is determined solely by the presence of small ions surrounding the protein molecules and interacting with them. Protein molecular sorption characteristics may be characterized by variation in the electric conductivity of the solution which determines the concentration of ions remaining free. Where changes are induced in the protein solution accompanied by an increase in adsorption activity, the concentration of free ions decreases and high-frequency conductivity declines. The concentration of free ions rises in the case of dissociation or desorption and conductivity increases. With specifically stable molecular structures the concentration of small ions in the solution does not change, or changes only slightly, in 1 - 2 hours, so that conductivity also remains constant. High-frequency electrical conductivity is measu-

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The use of the high-frequency ...

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D268/D305

red by the temperature coefficients which is a simple, quick, and reasonably accurate method. A detailed description is given of the apparatus for measuring them, consisting essentially of a generator connected to a 6MHz (6Zh3P) lamp with quartz stabilization (7 megacycles/sec) and stabilized feed (electron stabilizer). For experimental work the aqueous protein solution with an ion content is placed in a fused quartz glass test tube with metal casing, and coupled to the generator terminals. Conductivity is measured 15, 45 and 90 minutes after dilution of the solution at temperature intervals of 0.5° from 37 - 34°C. The values obtained at different temperatures (36 - 35°C) can be presented as temperature coefficients and plotted in graph form. To determine the number of ions bound to 1 protein molecule a calibration graph is made for concentrations and temperature coefficients. Where the concentration of the reacting molecules is known, the number of ions bound to the protein can be calculated. Where the molecular weight of the protein is known, adsorption can be expressed in moles of the bound ion and in moles of the protein. Experimental results are presented for the interaction of copper ions with albumen in human plasma. The number of

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The use of the high-frequency ...

Cu^{++} ions bound to 1 mole of albumen at pH 4.2 was determined as ≈ 20 . The action of ionizing radiation on protein considerably changed its behaviour towards copper. Irradiation was with γ -rays (^{60}Co) in doses of 16, 800 and 28,000 r in a glass ampoule with a $\text{GUT}-400$ apparatus (GUT-400 therapeutic gamma unit), with $5.6 \cdot 10^3$ r/min. dose rate at room temperature. High frequency electric conductivity fell considerably after a 5 min. exposure indicating an increase in protein adsorption activity. The destruction of protein molecules in solution by gamma-radiation at the doses used was thought to take place by change in the protein configuration, attendant on the rupture of the hydrogen bonds which block the reactive groups of molecules. Change in the capacity of Cu ions, therefore, to combine with protein as the result of irradiation with gamma-rays may be explained by an increase in the availability to them of peptide nitrogen atoms. There are 4 figures and 16 references: 9 Soviet-bloc and 7 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: K. Azari and R. Feeney, J. Biol. Chem., 232, 1, 293, 1958; F. Cann and R. John,

Card 4/5

32741
S/205/61/001/006/001/022
D268/D305

The use of the high-frequency ...

J. Amer. Chem. Soc., 80, 16, 4263, 1958; J. Llory, Ann. biol. clin. 16, 5 - 6, 308, 1958; Isii, Yasuda, Sci. Repts Hyogo Univ. Agric., Ser. Natur., Sci., 2, 7, 1955.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo, Institut meditsinskoy radiologii, Khar'kov (Khar'kov State University im. A.M. Gor'kiy. Institute of Medical Radiology, Khar'kov)

SUBMITTED: April 21, 1961

X

Card 5/5

L 169/7-63 EWT(m)/ES(j)/EDS AFFTC/ASD AR/K
ACCESSION NR: AT3002359 S/2930/62/000/000/0023/0028

AUTHOR: Frenkel', L. A. (Kharkov)

54

TITLE: A study of sorption properties of blood serum proteins in the early developmental stages of radiation injuries

SOURCE: K voprosam ranney diagnostiki ostroy luchevoy bolezni; sbornik nauchnykh rabot. Kiev, Medgiz USSR, 1962, 23-28

TOPIC TAGS: blood protein, sorption property, surface structure, electric conductivity temporary coefficient, radiation dose, X-ray

ABSTRACT: Energy-structural changes in the blood serum protein surface structures and sorption property changes in the blood serum proteins were studied in relation to radiation doses. Rabbits were X-irradiated in single total doses of 200 or 800 r. Blood was analyzed 1, 2, 4, 7, 10, 15, 20, and 30 days after irradiation. Blood serum temperature coefficients of high frequency electric conductivity were determined 15 min and 45 min after dilution. Results show that during the radiation injury process sorption property disturbances in the blood serum protein complex occur and stability disturbances in the blood serum surface structures also occur. A definite dependence

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is observed between the disturbances and radiation dose amounts both in the nature of the developing processes and in the stability absolute shift values for 200 and 800 r. The energy-structural disturbances in the blood serum protein sorption properties (as indicated by the high frequency electric conductivity temperature coefficients) appear to belong to the early physico-chemical type of organism reactions and should be studied in greater depth. Orig. art. has: 3 figures, 2 tables.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 28May63

ENCL: 00

SUB CODE: AM

NO REF Sov: 007

OTHER: 002

Card 2/2

ARNAUTOV, A.K.; BURSTEYN, Sh.A.; GENES, V.S.; KOGAN, I.K.; MAMATYUK, Ye.M.;
LITVINENKO, A.S.; MOSKALENKO, I.P.; NIKOLAYEVA, M.G.; PISKAREVA, Ye.V.;
POPOVA, L.Ya.; RUDNEV, L.I.; SIDYAKIN, V.V.; TKACH, V.K.;
FASTYUCHENKO, O.V.; FISUN, A.N.; FRENKEL', L.A.; TSYBENKO, N.A.;
SHRAMENKO, B.I.

Comparative study on the effect of X rays (197 kv) and braking radiation generated with linear accelerator (3 Mev) upon animals. Radio-biologija 2 no.2:211-215 '62.
(MIRA 15:4)

1. Khar'kovskiy institut meditsinskoy radiologii i Ukrainskoy fiziko-tehnicheskoy institut AN USSR, Khar'kov.
(RADIATION--PHYSIOLOGICAL EFFECT)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620007-8

FRENKEL, L. B., Engineer

Question and answer concerning heat treatment of high-speed steel tools, Stanki I
Instrument, 17, Nos. 2-3, 1946

BB-52059019

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620007-8"

FRENKEL', L.I.

TUBYANSKIY, L.I.; FRENKEL', L.D.

[Stalin DME high-pressure turbines; design and maintenance] Parovye
turbiny vysokogo davleniya DME imeni Stalina; konstruktsiya i obslu-
zhivanie. Moskva-Leningrad, Gosenergoizdat, 1953. 326 p. (MLRA 7:11D)

GRIMBERG, M.I., laureat Stalinskoy premii, doktor tekhnicheskikh nauk,
professor; LEVIN, B.M., inzhener; FREMKEL', L.D., inzhener;
POLISHCHUK, V.L., inzhener; BEREZYUK, D.I., inzhener.

SVK-150-1 steam turbine made by the Leningrad (Stalin) Metallurgical
Plant. Energomashinostroenie no.1:5-16 O '55. (MLRA 9:5)
(Steam turbines)

TUBYANSKIY, Lev Israilevich; FRENKEL', Leonid Davydovich; STEPANOV, I.M.,
redaktor; ZABRODINA, A.A., tekhnicheskij redaktor

[High-pressure steam turbines designed by the Leningrad Metalworks]
Parovye turbiny vysokogo davleniya Leningradskogo Metallicheskogo
zavoda; konstruktsiya i obsluzhivanie. Izd. 2-oe, ispr. i dop.
Moskva, Gos. energ. izd-vo, 1956. 403 p. (MLRA 10:4)
(Leningrad—Steam turbines)

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FRENKEL, L D

p r

PHASE I BOOK EXPLOITATION

1144

Leningradskiy metallicheskij zavod imeni Stalina, Leningrad

Razvitiye tekhniki na Leningradskom Metallicheskem zavode imeni
Stalina (Technological Developments at the Leningrad Metal
Works imeni Stalin) Moscow, Mashgiz, 1957. 313 p. 6,000
copies printed.

Ed.: Bushuyev, M.N., Engineer; Editorial Board: Berezin, B.A.,
Engineer; Mernik, M.Kh.; Sutokskiy, N.V., Engineer; Edel',
Yu.U., Candidate of Technical Sciences; Ed. of Publishing
House: Gofman, Ye.K.; Tech. Ed.: Pol'skaya, R.G.; Chief Ed.
(Leningrad Division, Mashgiz): Bol'shakov, S.A., Engineer.

PURPOSE: This book is intended for personnel of the LMZ (Lenin-
grad Metal Works) and also for other plants and institutes.

COVERAGE: The book was published in connection with the 100th
anniversary of the Leningrad Metal Works and contains articles

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Technological Developments (Cont.)

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dealing with the technological progress of the plant in developing powerful steam, gas, and hydraulic turbines.

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AVAILABLE: Library of Congress (TJ267.L4)

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2-11-59

FRENKEL', L. D.

Frenkel', L. D., Ettinger, S. M., and Chernin, Kh. N., Engineers. Problems in the Construction of Stationary Gas Turbine Installations. Page 105.

The authors discuss several problems dealing with the design of stationary gas turbine installations, axial and centrifugal compressors, and combustion chambers. The article contains drawings of gas turbine installations and tables and graphs of experimental research data on gas turbines.

Steam and Gas Turbine Construction, Moscow, Mashgiz 1957, 351 pp.

AUTHOR: Frenkel', L.D., Engineer.

317

TITLE: Technical project for a 25 MW gas turbine installation.
(Tekhnicheskiy proyekt gazoturbinnoy ustanovki moshchnost'yu.
25 000 kvt.)

PERIODICAL: "Energomashinostroenie", (Power Machinery Construction),
1957, No. 5, p. 30, (U.S.S.R.)

ABSTRACT: The steam and gas turbine design office of the Leningrad Metal Works has developed a project for a gas turbine installation intended to drive a 25 MW alternator. In designing this installation, the designers set out to produce an economical and reliable set which could find extensive use. The fuel will be natural gas of high calorific value or natural gas from oil fields.

The gas turbine is a single shaft set consisting of two axial compressors with intermediate cooling, high and low pressure turbines and one combustion chamber. The heat of the exhaust gases will be used in a regenerator and also in a boiler installation which is connected in parallel with the generator so that more than 30 Mcal per hour are obtained from using the heat of the exhaust gases for district heating purposes.

With an ambient air temperature of 17 °C the efficiency of the set will be 27 - 28%, or making full use of heat supply about 50%. The total length of the set is 34 metres and the width 8 metres.

Technical project for a 25 MW gas turbine installation.
(Cont.)

Making use of the experience obtained in designing the first gas turbine set type GT-12-3 the works has designed a simple, compact and cheap installation which has better technical economic characteristics than a steam turbine installation of comparable power. Even though the initial gas temperature is 700 °C by use of air cooling of the cylinder and the rotor the use of austenitic steel has been reduced to a minimum.

No figures, no literature references.

FRENKEI, L.D., inzh.; ETINGER, S.M., inzh.; CHERNIN, Kh.N., inzh.

Design of stationary gas-turbine units. [Trudy] IMZ no.5:105-130
'57. (MIRA 11:6)
(Gas turbines--Design)

FRENKEL', L.D., inzh.

Starting the GT-12-3 gas-turbine of the Leningrad Metalworking
Plant; brief news. Energomashinostroenie 4 no.10:28, 48 0 '58.
(Gas turbines) (MIRA 11:11)

YABLONIK, Rakhmiyel' Mordukhovich; FRUMKEL', L.D., inzh., retsenzent;
MALIKOV, A.V., inzh., red.; BASENTSYAN, A.A., red.izd-va;
DANILOV, L.N., red.izd-va; TIKHANOV, A.Ya., tekhn.red.

[Gas turbine installations] Gazoturbinnye ustanovki. Moskva,
Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 408 p.
(MIRA 13:2)

(Gas turbines)

FRENKEL', L.D., inzh.

Gas turbine installations of the Leningrad Metallworking Plant.
for electric power plants. Energomashinostroenie 6 no.2:2-6
F '60. (MIRA 13:5)

(Leningrad--Gas turbines)

S/114/60/000/004/009/009
E194/E355

AUTHOR: Frenkel', L.D., Engineer

TITLE: Two New Designs of Gas Turbine

PERIODICAL: Energomashinostroyeniye, 1960, No. 4,
p. 46

TEXT: In December, 1959, the Scientific Technical Council of LMZ (Leningrad Metal Works) considered and confirmed two projects for gas-turbine installation: a technical project for a gas-turbine compressor of 9 000 kW and a draft project for a power generation set of 100 MW. The compressor with gas-turbine drive type ГТН-9-750 (GTN-9-750) is intended for compressor stations on main gas pipelines; the compression ratio is 1.44. The gas-turbine drive to the compressor has two shafts; the high-pressure turbine has two discs fitted to an overhang of the air compressor shaft and running at 4 100 r.p.m. The low-pressure turbine has a single disc which drives the gas compressor through an intermediate shaft at a speed of 5 000 r.p.m. The gas conditions at inlet to the turbine are 750 °C at 4.5 atm; the regenerator has 70% ✓
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S/114/60/000/004/009/009
E194/E355

Two New Designs of Gas Turbine

regeneration. The efficiency of the gas-turbine drive at the compressor coupling should be not less than 25%. The draft project of the gas-turbine power generating set of 100 MW uses the open cycle and it shows that a prime mover of this type will be quite economic for large power stations. The gas temperature at inlet to both high- and low-pressure turbines is 750 °C. The efficiency of turbines and compressors is about 90%. The system provides for three intermediate air coolers and one intermediate gas heater. Under these conditions the set efficiency may be 36-37%. For regions where natural gas or liquid fuel is economic for large power stations, sets of this type may be the best prime movers for stations of 500 - 800 MW capacity. The

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S/114/60/000/004/009/009
E194/E355

Two New Designs of Gas Turbine

design for the gas turbine ГТ-100-750 (GT-100-750) is largely based on experience obtained by the works in designing set ГТ-25-700 (GT-25-700), which is now being built. After the 25 MW set has been built and run, the 100 MW set can be undertaken with a good assurance of satisfactory results.

Card 3/3

FRENKEL', L.D., inzh.

Gas-turbine system with a 100,000 Kw. capacity developed by
the Leningrad Metallurgical Plant. Energomashinostroenie
7 no.5:40 My '61. (MIRA 14:8)
(Gas turbines)

ZEMZIN, Viktor Nikolayevich; FRENKEL', Leonid Davydovich. Prinimal
uchastiye ROZENBLYUM, V.I.; ANTONOV, S.N., inzh., retsenzent;
OKERBLOMA, N.O., doktor tekhn. nauk, prof., red.; BOCHAROVA,
Ye.G., red. izd-va; SHCHETININA, L.V., tekhn. red.

[Welded elements for steam and gas turbines] Svarnye konstruktsii
parovykh i gazovykh turbin. Pod red. N.O. Okerbloma. Moskva,
Mashgiz, 1962. 222 p. (MIRA 15:7)

(Electric welding) (Gas turbines)
(Steam turbines)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620007-8

FRENKEL', L.D., inzh.

The GTN-750 gas turbine supercharger manufactured by the Leningrad Metalworks. Energomashinostroenie 8 no.1:32 Ja '62.

(MIRA 15:3)

(Leningrad—Gas turbines)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620007-8"

FRENKEL, L. D.

PHASE I BOOK EXPLOITATION

SOV/6169

Zemzin, Viktor Nikolayevich, and Leonid Davydovich Frenkel'

Svarnyye konstruktsii parovykh i gazovykh turbin (Welded Structures in Steam and Gas Turbines). Moscow, Mashgiz, 1962. 222 p.
3000 copies printed.

Ed. (Title page): N. O. Okerblom, Doctor of Technical Sciences, Professor; Reviewer: S. N. Antonov, Engineer; Ed. of Publishing House: Ye. G. Bocharova; Tech. Ed.: L. V. Shchetinina; Managing Ed. for Literature on the Design and Operation of Machines (Lenigrad Department, Mashgiz): F. I. Fetisov, Engineer.

PURPOSE: This book is intended for designers and process engineers at turbine manufacturing plants, and also for workers at scientific research institutes engaged in the study of welded joints and the manufacture of welded structures for turbines. It may also be useful to students at technical schools specializing in welding and power-equipment manufacture.

Card 1/2

Welded Structures in Steam and Gas Turbines

SOV/6169

COVERAGE: The book reviews basic principles for selecting materials and for designing and producing welded subassemblies for turbines. Typical welded structures for turbines are reviewed in detail, and suggestions are made on the selection of the most suitable welded structures from the standpoint of their fabricability. The third section of Chapter III was written by V. I. Rozenblyum. There are 125 references, mostly Soviet.

TABLE OF CONTENTS:

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Ch. I. Principle of Steam and Gas Turbine Operation; Operating Conditions and Design	5

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2

500/500/17-2/SP2/111/1/PLATE 1 OF 100

1007

1977.

Kantor, T. A. (Factor of technical safety as a criterion of reliability of power engineering)

The status and prospects of developing gas for the power plants

Reploenergetika, no. 6, 1965, 2-7

gas turbines, power plants, equipment, methods

The status of the development of gas turbine power plants in the USSR
and abroad

The Soviet national economy and power industry have installed more than 1,000 MW
of thermal power units based on gas turbines.

Gas turbines are also used in aircraft, ships, and other areas.

A gas turbine unit is shown in Fig. 1. In this unit, 1 is the low pressure compressor, 2 the combustion chamber, 3 the high pressure compressor, 4 the turbine, 5 the generator, 6 the air filter, 7 the fuel injection system, 8 the cooling system, 9 the exhaust system, 10 the inlet system, and 11 the control system.

A schematic diagram of a gas turbine unit is shown in Fig. 2. In this unit, 1 is the low pressure compressor, 2 the combustion chamber, 3 the high pressure compressor, 4 the turbine, 5 the generator, 6 the air filter, 7 the fuel injection system, 8 the cooling system, 9 the exhaust system, 10 the inlet system, and 11 the control system.

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ACCESSION NR: AP5011770

the combustion chamber, 4 the gas turbine, and 5 the intermediate cooler.
In Fig. 1(s), 1 is the high pressure compressor, 2 the intermediate pressure
compressor, 3 the high pressure gas turbine, 4 the intermediate pressure
gas turbine, 5 the low pressure gas turbine, 6 the intermediate cooler
and 7 the combustion chamber. The article also discusses the possibility
of the possibility and viability of using the proposed scheme at power
plants, gas stations, and Candidate of Technical Sciences, K. V. Gerasimov,
stated that the authors did not consider prospect of using the scheme
in power installations. Orig. art. had "Sukharev et al." as author.

Source: N: Leningradskiy politekhnicheskiy institut (Leningrad Polytechnic
Institute),

SUBMITTED: 00

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REF ID: 000

OTHER: 000

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100034

ACCESSION NR: AP5011770

ENCLOSURE: 01

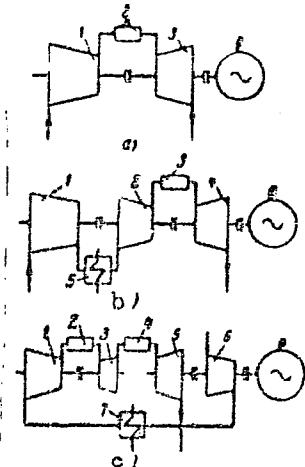


Fig. 1.

Feasible schemes for gas turbine installations

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CIA-RDP86-00513R000413620007-8

OL'KHOVSKIY, G.G., inzh.; FRENKEL', L.D., inzh.; BIZYAYEV, Ye.V., inzh.;
RACHIN, E.V., inzh.

First results of the adjustment and operation of a gas turbine
system with 25 Mw. rating. Elek. sta 36 no.4:27 32 Ap '65.
(MIRA 18:6)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620007-8"

L 9823-66 EPA/EWP(f)/EPF(n)-2/T-2/ETC(m)
ACC NR: AP6003741

SOURCE CODE: UR/0104/65/000/004/0027/0032

AUTHOR: Ol'khovskiy, G.G. (Engineer); Frenkel', L.D. (Engineer); Bizayev, Ye. V. (Engineer); Rachin, E.V. (Engineer)

ORG: none

TITLE: First results of setting up and usage of the 25 Mw gas turbine system

SOURCE: Elektricheskiye stantsii, no. 4, 1965, 27-32

TOPIC TAGS: electric power engineering, gas turbine, electric power plant, electric power production

ABSTRACT: A description of the type GS-25-700 gas turbine power system, and the results of the starting-testing, and first usage periods of the system. The turbine is fueled with natural gas, has a coefficient of fuel heat usage of 57% with the regenerator disconnected. The turbine passed a period of setting up and test usage of 2,200 hours. It was found to be simple in operation, its noise does not exceed health norms. A power of 21.5 Mw at an efficiency of about 24% was attained. The planned power was not attained, the efficiency of the turbine and compressor was below plan, the resistance of some sections of the gas-air course and expenditure of air for cooling and back compression exceeded plan. The main difficulties in usage resulted from compressor contamination and deposition of sediment in the air cooler tubes. It is hoped that further work will make the system capable of attaining the design power with high reliability.

UDC: 621.438

Card 1/2

13
B

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620007-8

L 9823-66

ACC NR: AF6003741

Orig. art. has: 4 figures. [JPRS]

SUB CODE: 09 / SUBM DATE: none /

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Card 2/2

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620007-8"

L 17617-66 SWP(f)/EPF(n)-2/T-2/ETC(m)-6
ACC NR: AP6006398

WV SOURCE CODE: UR/0413/66/000/002/0142/0142

INVENTOR: Frenkel', L. D.; Chebanenko, N. I.; Chernin, Kh. N.; Bizayev, Ye. V.;
Tat'yankin, A. P.

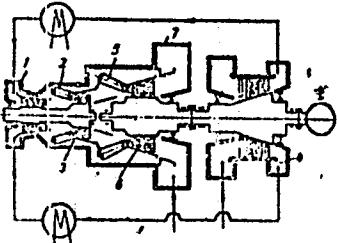
ORG: none

TITLE: Double-shaft gas turbine installation. Class 46, No. 178245. [announced by Leningrad metal factory im. XXII Congress KPSS (Leningradskiy metallicheskiy zavod)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 142

TOPIC TAGS: gas turbine, engine turbine system, turbine design

ABSTRACT: The proposed double-shaft gas turbine unit is designed to reduce the length of the turbine ducts and the hydraulic losses during flow deflection in them.



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Fig. 1. Gas turbine unit

1 - High-pressure compressor; 2 - high-pressure preheat stage; 3 - high-pressure turbine; 4 - low-pressure compressor; 5 - low-pressure preheat stage; 6 - low-pressure turbine; 7 - external cylinder.
UDC: 621.438.002.72

L 17617-66

ACC NR: AP6006398

In this design, both shafts are located concentrically (see Fig. 1) and all the other components, except for the low-pressure compressor, are housed in one cylinder. Orig. art. has: 1 figure. [TN]

SUB CODE: 21/ SURM DATE: 22Feb65/ ATD PRESS: 4210

Card 2/27/95

FRENKEL', Lazar' Samoylovich; MEL'YEV, A.S., redakter; VOLKOVA, Ye.,
Mehanicheskiy redakter.

[Production of bimetallic parts for shipbuilding and ship repair]
Izgetevlenie bimetallicheskikh detalei v sudostreeneii i sudore-
mente. Moskva, Izd-vo "Morskei transport", 1955. 38 p. (MLRA 9:5)
(Shipbuilding) (Centrifugal casting)

FRENKEL', Lazar' Samoilovich; YUKHVID, M.Ye., redaktor; MELKOV, A.S.
redaktor; TIKHONOVA, Ye.A., tekhnicheskij redaktor

[Use of electric metallization in ship repair] Primenenie elek-
trometallizatsii v sudoremonte. Moskva, Izd-vo "Morskoi trans-
port," 1955. 71 p. (MLRA 8:10)
(Metal spraying) (Ship--Maintenance and repair)

ZAGORSKAYA, Yelena Petrovna; FRENKEL', L.S., redaktor; NELDOVA, E.S.,
redaktor izdatel'stva; TIKHONOVA, Ye.A., tekhnicheskij redaktor

[Safety engineering in metal cutting] Tekhnika bezopasnosti pri
obrabotke metallov rezaniem. Moskva, Izd-vo "Morskoi transport,"
1956. 69 p.
(Metal cutting--Safety measures)

(MIRA 9:10)

FRENKEL', M.

In the by-product coking plant of the Nizhniy Tagil Metallurgical
Combine. Koks i khim. no.3:56 '60. (MIRA 13:6)
(Nizhniy Tagil--Coke ovens)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620007-8

FRENKEL¹, M.A.

Fat and glycogen in the life cycle of the infusorian *Tillina magna* Gruber. Vest. LOU 20 no.15:60-66 '65. (MIRA 18:9)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413620007-8"